

a stage which holds said first object on a mounting surface, wherein the stage has a hole portion in which the mounting surface is formed, and the stage is movable in a two-dimensional plane, the exposure beam passing through the hole portion; and a transfer system which transports said first object to/from the mounting surface formed in the hole portion of said stage.

REMARKS

Favorable reconsideration of this application in view of the present response is respectfully requested.

Claims 1-17 and 19-42 are pending in this application. Claims 16 and 17 stand withdrawn from consideration. Claims 1-11, 13, 14, 19-24, 28-32, and 34-39 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. patent 3,952,203 to Hoppe in view of U.S. patent 5,323,012 to Auslander et al. (herein "Auslander"). Claims 12, 15, 25, and 26 were rejected under 35 U.S.C. § 103(a) as unpatentable over Hoppe and Auslander as applied to Claims 1-11, 13, 14, 19-24, 28-32 and 34-39, and further in view of U.S. patent 5,124,561 to Faure et al. (herein "Faure"). Claims 27, 33, and 40-42 were objected to as dependent upon a rejected base claim, but were noted as allowable if rewritten in independent form to include all of the limitations of their base claims and any intervening claims.

Initially, applicants gratefully acknowledge the indication of the allowable subject matter of Claims 27, 30, and 40-42.

Addressing now each of the above-noted rejections, the presently submitted claims are believed to patentably distinguish over the applied art.

It is initially noted that each of the independent claims is amended to clarify features recited therein. Specifically, independent Claim 1 clarifies that the object transported has "a pattern", and that pattern is transferred to/from a stage provided in an exposure apparatus "in which a substrate is exposed to an exposure beam from the object". Independent Claim 1

also clarifies "the exposure beam passing through the hole portion" of the stage. The other independent claims are also similarly amended. Such subject matter is fully supported by the original specification, for example in Figures 1 and 2 showing as non-limiting examples the object RST, the substrate W, and the hole 40 through which an exposure beam passes.

Such subject matter as clarified in the claims is believed to clearly distinguish over the applied art. More specifically, neither of the references to Hoppe nor Auslander disclose that an object, such as a mask for lithography as a non-limiting example, is held within a hole portion of a stage through which an exposure beam passes. The outstanding rejection appears to rely on recess 23 in Hoppe to correspond to the claimed "hole". However, that recess 23 is an area on which an object carrier 18 may be placed,² and Hoppe does not disclose or suggest that an exposure beam passes through the recess 23. Thus, the recess 23 in Hoppe does not meet the limitations of the claimed "hole".

Further, Auslander does not provide any teachings to overcome the above-noted deficiencies of Hoppe.

In such ways, each of the claims is believed to distinguish over the combination of teachings of Hoppe in view of Auslander.

Moreover, no teachings in Faure can overcome the above-noted deficiencies of Hoppe in view of Auslander.

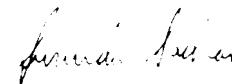
Thus, each of the currently pending claims is believed to distinguish over the applied art.

² Hoppe at column 4, lines 65-67.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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IN THE CLAIMS

Please amend Claims 1, 15, 25, 29, 36, and 39 as follows:

--1. (Twice Amended) A transfer method of transporting an object having a pattern to be transferred to/from a stage provided in an exposure apparatus in which a substrate is exposed to an exposure beam from the object for manufacturing a microdevice, the method comprising:

supporting one surface of said object on a plurality of support members;

loading said object supported by said plurality of support members onto a support surface of said stage, wherein the stage is movable two-dimensionally, and the stage has a hole portion in which the support surface is formed, the exposure beam passing through the hole portion; and

withdrawing said plurality of support members from said hole portion to an other surface side of said object after loading said object onto the support surface of said stage.

12. (Canceled).

15. (Amended) The method according to claim 14, wherein said object includes [a mask and] a frame member, a predetermined circuit pattern being formed on said [mask] object, said frame member being securely fixed on said [mask] object, and said openings being formed in said frame member.

25. (Twice Amended) The apparatus according to claim 20, wherein said first object includes [a mask and] a frame member, a predetermined circuit pattern being formed on said

[mask] first object, said frame member being securely fixed on said [mask] first object, and said openings [are] being formed in said frame member.

29. (Twice Amended) An exposure apparatus for transcribing a pattern formed on a first object onto a second object by exposing the second object to an exposure beam from the first object with an optical system, comprising:

a stage which mounts said first object on a mounting surface, wherein the stage has a hole portion in which the mounting surface is formed, and the stage is movable in a two-dimensional plane, the exposure beam passing through the hole portion; and

a transfer system which transports said first object to/from said stage, said transfer system including:

a plurality of support members which supports said first object; and

a first driving mechanism which moves said plurality of support members in a first direction perpendicular to the two-dimensional plane between a first position and a second position, wherein the ends of the plurality of support members are positioned in the hole portion of the stage when said plurality of support members are moved to said second position by the first driving mechanism.

36. (Twice Amended) A method of manufacturing an exposure apparatus for transcribing a pattern formed on a first object onto a second object by exposing the second object to an exposure beam from the first object with an optical system, comprising:

providing a first stage which mounts said first object on a mounting surface, wherein the first stage has a hole portion in which the mounting surface is formed, and the stage is movable in a two-dimensional plane, the exposure beam passing through the hole portion;

providing a transfer apparatus which transports said first object to/from said first stage, said transfer apparatus including:

a plurality of support members which supports said first object; and

a first driving mechanism which moves said plurality of support members in a first direction perpendicular to the two-dimensional plane between a first position and a second position, wherein the ends of the plurality of support members are positioned in the hole portion of the stage when said plurality of support members are moved to said second position by the first driving mechanism;

providing said optical system; and

providing a second stage which mounts said second object.

39. (Amended) An exposure apparatus for transcribing a pattern formed on a first object onto a second object by exposing the second object to an exposure beam from the first object with an optical system, comprising:

a stage which holds said first object on a mounting surface, wherein the stage has a hole portion in which the mounting surface is formed, and the stage is movable in a two-dimensional plane, the exposure beam passing through the hole portion; and

a transfer system which transports said first object to/from the mounting surface formed in the hole portion of said stage.--